

**REMARKS**

By this amendment, an Abstract of the Disclosure has been added as the last page of the application (page no. 25). The separate page for the Abstract of the Disclosure is enclosed herewith.

An amendment to the specification is also made to incorporate related application information and headings and subheadings.

Claims 14-23 are currently pending. The claims have been amended in order to conform them to U.S. practice. No new matter has been introduced by these amendments.


The examiner is respectfully requested to consider the above preliminary amendment prior to the examination of the application.

If there is any fee due in connection with the filing of the Preliminary Amendment, please charge the fee to our Deposit Account No. 06-0916. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should be charged to our deposit account.

Respectfully submitted,

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Date: June 28, 2006

By:   
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Reg. No. 25,961

Attachment: Abstract of the Disclosure

**IN THE ABSTRACT**

Replace the abstract originally provided on the cover sheet of the PCT application with the following new abstract. A new abstract numbered page 25 is enclosed for the last page of the application following the claims.

**ABSTRACT OF THE DISCLOSURE**

An optical mode converter has a coupling waveguide and a receiving waveguide. The coupling waveguide has at an input end a first effective refractive index and includes a tapered core of a substantially constant refractive index with a substantially square cross section at the input end, which has a size that tapers down moving away from the input end. The coupling waveguide also has a cladding at least partially surrounding the tapered core. The receiving waveguide has a second effective refractive index at an output end and includes a core of a substantially constant refractive index greater than the refractive index of the tapered core of the coupling waveguide and a cladding at least partially surrounding the core. A side surface of the tapered core of the coupling waveguide is optically in contact, in a coupling portion, with the receiving waveguide so as to allow optical coupling between the coupling waveguide and the receiving waveguide. The refractive index of the tapered core of the coupling waveguide is selected so that the first effective refractive index and the second effective refractive index differ from each other in absolute value less than 30% of the difference between the core refractive index and the effective refractive index of the receiving waveguide.